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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,217	06/11/2001	Ikuya Tsurukawa	206470US-2	9559
22850	7590	05/08/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			TAMAI, KARL I	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/877,217

Applicant(s)

TSURUKAWA ET AL.

Examiner

Tamai I.E. Karl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-29 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 12-14, 20, 21, and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ooyama et al. (Ooyama)(JP 56-88650). Ooyama teaches a DC motor having a stator 4 opposed to the rotor magnetic poles 8 with a commutator having flat disc portion 10D with electrical parts 12 to reduce noise mounted on a flat surface on the rotor side and planar contact electrodes 11 on the second flat surface and with a shaft perpendicularly intersecting the electrical parts mounting baseboard, and having a pair of electrical brushes in sliding contact with the electrode part to provide power to the rotor coils where each pair of brushes includes first and second separate portions in sliding contact with the contact electrodes which inherently cause a phase difference due to a shift in the rotational angle of the sliding contacts of the separate portions relative to the contact electrode part. Ooyama teaches the brushes mounted on a support base 2.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooyama et al. (Ooyama)(JP 56-88650) and Mabuchi (US 4228376). Ooyama teaches every aspect of the invention except the brushes having external terminals. Mabuchi teaches the brushes include terminals 4 for connection to a power supply. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Ooyama with brushes including terminals for easy assembly of the brushes as taught by Mabuchi.

6. Claims 5, 7, 8, 9, 15, 17, 23, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooyama et al. (Ooyama)(JP 56-88650) and Yaguchi et al. (Yaguchi)(JP 06-189504). Ooyama teaches every aspect of the invention except a

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rotational detection brush and the angle of the brush being  $180/n$  and the rotor position brush having separate portions. Yaguchi teaches that DC motor are provided with rotation detection brushes to surely determine the speed and direction of the motor. Yaguchi teaches the angle of the brush is a result effective variable. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Ooyama with the rotation detection brush to provide accurately determine the speed and direction of the rotor, as taught by Yaguchi, and with the angle of the brush being  $180/n$  to optimize the position of the rotation detection brushes, and because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (see *In re Aller*, 105 USPQ 233), and with the same brushes for the electrode brushes and position detection brushes to simplify production and assembly.

7. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooyama et al. (Ooyama)(JP 56-88650) and Yaguchi et al. (Yaguchi)(JP 06-189504), in further view of Mabuchi (US 4228376). Ooyama and Yaguchi teach every aspect of the invention except the brushes having external terminals supported on a base. Mabuchi teaches the brushes include terminals 4 supported on base 6 for connection to a power supply. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Ooyama and Yaguchi with the brushes including terminals for easy assembly of the brushes as taught by Mabuchi.

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8. Claims 10, 18, 22, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooyama et al. (Ooyama)(JP 56-88650) and Ito (JP 55-133651). Ooyama teaches every aspect of the invention except the respective brushes shifted in the radial direction. Ito teaches shifting the commutator brushes in the radial direction to reduce wear. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Ooyama with the brushes shifted radially to prevent wear as taught by Ito.

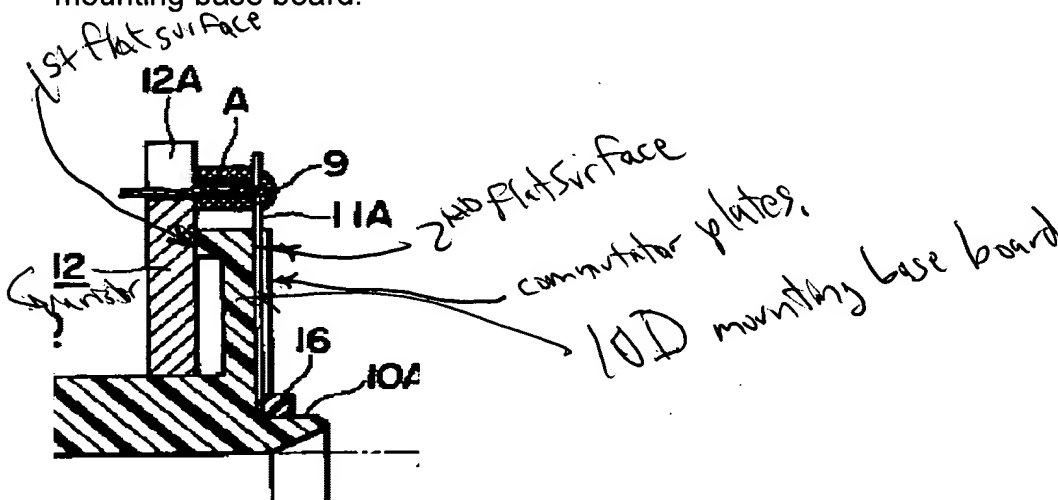
9. Claim 11, 25, 19, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooyama et al. (Ooyama)(JP 56-88650) and Ito (JP 550133651) and Yaguchi et al. (Yaguchi)(JP 06-189504). Ooyama and Ito teach every aspect of the invention except a rotational detection brush and brush arranged at different radial position than the electrode brush. Yaguchi teaches that DC motor are provided with rotation detection brushes to surely determine the speed and direction of the motor. Yaguchi teaches the angle of the brush is a result effective variable. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Ooyama with the rotation detection brush to provide accurately determine the speed and direction of the rotor, as taught by Yaguchi, and with the angle of the brush being  $180/n$  to optimize the position of the rotation detection brushes, and because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (see *In*

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re Aller, 105 USPQ 233), and with the rotational and electrode brushes shifted to different radial positions because Ito teach that it reduces wear on the commutator.

### **Response to Arguments**

10. Applicant's arguments filed 3/7/2006 have been fully considered but they are not persuasive. Applicant's arguments that Ooyama teaches a commutator being formed separate from the electrical parts mounting base board is not persuasive. Ooyama teaches the varistor 12 mounted on a first flat surface facing the rotor and the commutator plates 11a mounted on a second flat surface of the mounting board 10. The examiner notes that if the mounting portion 10d was not flat then the flat varistor and flat commutator plates would not engage the flat first and second surfaces of the mounting base board.



### **Conclusion**

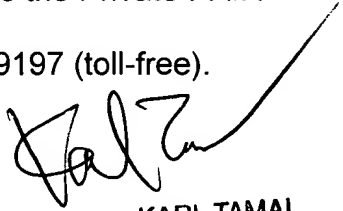
11. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (571) 273 - 8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai  
PRIMARY PATENT EXAMINER  
May 5, 2006



KARL TAMAI  
PRIMARY EXAMINER